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OXC-0708-60 ✓

Copy 1 of 5

14 July 1960

MEMORANDUM FOR : Deputy Director (Plans)

SUBJECT : J-58's Engine Design Compromises

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1. Subsequent to the last OXCART supplier's meeting, [REDACTED] traveled to West Palm Beach, Florida, primarily to begin piecing together the anticipated problems in weight, cost, and time associated with design choice of the Mach 3.2 versus Mach 3.5 J-58 engine versions.

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2. [REDACTED] first report deals with the current weight status of the engine. This indicates that the current expected weight for the first flight test engine is estimated at 6,097 pounds versus a specification weight for the first flyable engine of 5,657 pounds.

3. In order that the specification weight can be reached, Pratt & Whitney will have to substitute titanium in place of the originally planned stainless steel or wasp alloy materials, resulting in a reduction from 3.5 to 3.2 engine Mach number.

4. The exact identification of the affected parts and the assessment of design choice of the materials, weights, and allowable temperature performance is under detailed study by Pratt & Whitney.

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5. The attached report by [REDACTED] is an excellent summary of the situation as it now stands. He will devote a good deal of attention to this problem until at least the next scheduled suppliers' meeting.

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Attachment:

OXC-0617-60

Chief, Technical Analysis Staff
DPD-DD/P

*returned
to DPD via
Memo dated 16 July 60.*